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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	09/846,722
Filing Date	1 May 2001
First Named Inventor	Katz
Art Unit	1617
Examiner Name	Gregory Mitchell
Attorney Docket Number	CSI1-005CIP

ENCLOSURES (*Check all that apply*)

- [✓] Fee Transmittal Form
  - [✓] Fee Attached
- [ ] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
- [ ] After Allowance Communication to a Technology Center (TC)
- [ ] Appeal Communication to Board of Appeals and Interferences
- [✓] Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary Information
- [ ] Status Letter
- [ ] Other Enclosure(s) (please Identify below):

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Richard R. Muccino
Signature	
Date	24 April 2006

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Typed or printed	Richard R. Muccino		
Signature		Date	24 April 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, Washington, DC 20231.**

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PTO/SB/17 (08-03)
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FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☑ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 250

Complete if Known	
Application Number	09/846,722
Filing Date	1 May 2001
First Named Inventor	Katz
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Art Unit	1617
Attorney Docket No.	CSI1-005CIP

METHOD OF PAYMENT *(check all that apply)*

☐ Check ☑ Credit card ☐ Money Order ☐ Other ☐ None

☑ Deposit Account:

Deposit Account Number: 13-4822

Deposit Account Name: Richard R. Muccino

The Director is authorized to: *(check all that apply)*

☐ Charge fee(s) indicated below ☑ Credit any overpayments

☑ Charge any additional fee(s) during the pendency of this application

☐ Charge fee(s) indicated below, **except for the filing fee** to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1001	750	2001	375	Utility filing fee	
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

		Extra Claims		Fee from below	Fee Paid
Total Claims		-20** =		X	=
Independent Claims		- 3** =	1	X	=
Multiple Dependent					=

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	84	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple dependent claim, if not paid
1204	84	2204	42	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for *ex parte* reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	410	2252	205	Extension for reply within second month	
1253	930	2253	465	Extension for reply within third month	
1254	1,450	2254	725	Extension for reply within fourth month	
1255	1,970	2255	985	Extension for reply within fifth month	
1401	320	2401	160	Notice of Appeal	
1402	320	2402	160	Filing a brief in support of an appeal	250
1403	280	2403	140	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,300	2453	650	Petition to revive - unintentional	
1501	1,300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	750	2810	375	For each additional invention to be examined (37 CFR 1.129(b))	
1801	750	2801	375	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 250

SUBMITTED BY				(Complete *(if applicable)*)	
Name (Print/Type)	Richard R. Muccino	*Registration No. (Attorney/Agent)*	32,538	*Telephone*	908-273-4988
Signature	Richard R. Muccino			*Date*	24 April 2006

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PATENT
CSI 1-005CIP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Patent Application Of:
Stanley E. Katz and Alain Martin

Group Art Unit: 1617

Serial No: 09/846,722

Examiner: Gregory W. Mitchell

Filing Date: 1 May 2001

For: Method and Composition for Treating Mammalian Nasal and Sinus Diseases Caused By Inflammatory Response

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER FOR APPELLANTS' BRIEF ON APPEAL

Sir:

Enclosed herewith please find appellants' Brief on Appeal in triplicate pursuant to 37 C.F.R Section 1.192 for filing in the above-identified patent application. Appellants do not request an oral hearing pursuant to 37 C.F.R. Section 1.194.

Appellant's attorney encloses a check in the amount of $250.00 (small entity) to cover the fee for filing a brief in support of an appeal pursuant to 37 C.F.R. Section 1.17(f). Appellant's attorney authorizes the Examiner to charge Deposit Account no. 13-4822 if there are any additional charges in connection with this response. A duplicate copy of this Transmittal Letter is enclosed.

By Richard R Muccino

Richard R. Muccino
Reg. No. 32,538
Attorney for Appellant(s)

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CERTIFICATE OF MAILING PURSUANT TO 37 C.F.R. SECTION 1.8

I hereby certify that this correspondence and any documents referred to as enclosed herewith are being deposited, pursuant to 37 C.F.R. Section 1.8, with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 24th of April, 2006.

By Richard R Muccino 24 April 06
Richard R. Muccino date
Reg. No. 32,538
Attorney for Applicant(s)

PATENT
CSI 1-005CIP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Patent Application Of:
Stanley E. Katz and Alain Martin

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For: Method and Composition for Treating Mammalian Nasal and Sinus Diseases Caused By Inflammatory Response

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANTS' BRIEF ON APPEAL

Sir:

This is an appeal to the Board of Patent Appeals and Interferences from a Final decision by the Primary Examiner dated 30 November 2005, in which claims 1-6, 8-18, and 27-31 have been rejected in the above-identified application.

(i) REAL PARTY IN INTEREST.

The party named in the caption of the brief is the real party in interest.

CERTIFICATE OF MAILING PURSUANT TO 37 C.F.R. SECTION 1.8

I hereby certify that this correspondence and any documents referred to as enclosed herewith are being deposited, pursuant to 37 C.F.R. Section 1.8, with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 24th of April, 2006.

By Richard R Muccino 24 April 06

Richard R. Muccino date
Reg. No. 32,538
Attorney for Applicant(s)

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01 FC:2402 250.00 OP

(ii) RELATED APPEALS AND INTERFERENCES.

Appellants are not aware of any other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(iii) STATUS OF CLAIMS.

This is a statement setting out the status of all claims, pending, withdrawn, or canceled, and identifying the claims on appeal.

This application is a continuation-in-part application of application serial no. 09/348,698, filed 7 July 1999 and application serial no. 09/312,168, filed 14 May 1999. Appellants filed this application with claims 1-30.

On 3 June 2003, the Examiner filed a restriction requirement restricting the claims to Group I, claims 1-18 and 26-30, and Group II, claims 19-25.

On 25 June 2003, appellants filed a Response electing to prosecute claims 1-18 and 26-30 and added new claim 31.

On 26 September 2003, the Examiner filed an Office Action rejecting claims 1-18 and 27-31 and withdrawing claims 19-26 (the Examiner apparently withdrew claim 26 into Group II).

On 18 December 2003, appellants filed a Response amending claims 1, 8-11, and 27 and deleting claim 7.

On 23 March 2004, the Examiner filed an Office Action, which Action was made final, in which claims 1-18 and 27-31 were rejected.

On 22 June 2004, appellants filed a Response amending claim 1.

On 17 February 2005, appellants filed a Petition to revive the application, which was unintentionally abandoned.

On 4 May 2005, appellants' Petition to revive the application was granted.

On 29 June 2005, the Examiner filed an Office Action maintaining the rejection of claims 1-6, 8-18 and 27-31.

On 30 August 2005, appellants filed a Response without amending any claims.

On 30 November 2005, the Examiner filed an Office Action, which Action was made final, in which claims 1-6, 8-18 and 27-31 were rejected.

On 19 January 2006, appellants filed a Response without amending any claims.

On 8 March 2006, appellants filed a Notice of Appeal with a Petition for a one month extension of time..

On 10 April 2006, the Examiner filed an Advisory Action maintaining the rejection of claims 1-6, 8-18 and 27-31.

Accordingly, claims 1-6, 8-18 and 27-31 are on appeal.

(iv) STATUS OF AMENDMENTS.

The Examiner has entered appellants' amendments to claims 1-6, 8-18 and 27-31.

(v) SUMMARY OF CLAIMED SUBJECT MATTER.

Appellants' invention provides a method for treating a disease state in mammals caused by mammalian nasal and sinus cells involved in the inflammatory response. The method comprises contacting the mammalian nasal and sinus cells with an inflammatory mediator. The inflammatory mediator is present in an amount capable of reducing the undesired inflammatory response, is an antioxidant, and is selected from the group consisting of pyruvate and a pyruvate precursors. The pyruvate precursor is not propylene glycol.

Appellants' invention further provides a method for the treatment of rhinitis, eosinophilia syndrome, and sinusitis. The method comprises administering a nasal solution to the nostrils of a patient in need thereof. The nasal moisturizing saline solution comprises a) water, b) sodium chloride, 0.65% by weight, c) pyruvate, at least 0.1mM, d) buffer, and optionally, e) a preservative. The nasal moisturizing saline solution is buffered and made isotonic.

(vi) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL.

The First Issue is whether or not appellants' claims 1-6, 8-17 and 31 are obvious under 35 U.S.C. Section 103(a) over *Katz* in view of *Amschler et al.*

The Second Issue is whether or not appellants' claim 18 is obvious under 35 U.S.C. Section 103(a) over *Katz* and *Amschler et al.* in further view of *Geria*.

The Third Issue is whether or not appellants' claims 27-30 are obvious under 35 U.S.C. Section 103(a) over *Katz* and *Amschler et al.* and in further view of *Picciano*.

(vii) ARGUMENTS.

The First Issue

Whether or not appellants' claims 1-6, 8-17 and 31 are obvious under 35 U.S.C. Section 103(a) over *Katz* in view of *Amschler et al.*

The Examiner has maintained the rejection of claims 1-6, 8-17 and 31 under 35 U.S.C. Section 103(a) as being obvious over United States patent no. 5,798,388 (*Katz*) in view of United States patent no. 5,449,676 (*Amschler et al.*). The Examiner states that *Katz* teaches a method of treating a disease state in mammals caused by mammalian cells involved in the inflammatory response which comprises contacting the mammalian cells involved in the inflammatory response with a therapeutically effective amount of an inflammatory mediator (col. 4, lines 58-67). The Examiner states that the inflammatory mediators are taught to be antioxidants selected from pyruvates (including lithium pyruvate, sodium pyruvate, potassium pyruvate, etc.) and pyruvate precursors, such as pyruvyl-glycene, pyruvyl-alanine, pyruvyl-leucine, pyruvyl-valine, etc. (col. 7, lines 21-41). The Examiner states that the inflammatory response reduced by the treatment is taught to be at least one of oxygen radical production, peroxide production, cytokine and/or protease production, prostaglandin production, erythema, histamine and interleukin production (col. 7, lines 15-20). The Examiner states that administration of the composition is in the form of liquids, ointments, etc. (col. 7, lines 52-56). The Examiner states that additional therapeutic agents, such as antibacterials, antivirals, antifungals, antihistamines, proteins, enzymes, hormones, nonsteroidal anti-inflammatories, cytokines and steroids, are taught to be administered prior to, after and/or with the inflammatory mediator (col. 8, lines 13-18). The Examiner notes that while administration is taught for "injured cells" in general, the reference specifically teaches inhalation treatments for disorders such as bronchial asthma, bronchitis, etc. (col. 6, line 66; col. 7, line 10; col. 7, line 65; col. 8, line 12). The Examiner concedes that *Katz* does not specifically teach the administration of the composition to the nasal cells nor does *Katz* specifically teach the concentration of inflammatory mediator as herein claimed.

The Examiner argues that *Amschler et al.* teaches a method of treating inflammatory disorders of the lung (e.g. bronchitis, bronchial asthma, etc.) and inflammatory disorders of the nose (e.g. rhinitis, sinusitis, etc.) with an anti-inflammatory composition (col. 8, lines 36-57; col. 9, lines 61-68). The Examiner states that it would have been obvious to administer the composition of *Katz* to the nasal or sinus cavities for the treatment of inflammatory disorders of the nasal or sinus cavities, such as rhinitis or sinusitis because (1) *Katz* teaches the treatment of mammalian cells involved in a inflammatory response with an anti-inflammatory composition in general; (2) *Katz* teaches the treatment of inflammatory disorders such as bronchitis and bronchial asthma, specifically; and (3) *Amschler et al.* teaches that anti-inflammatory compositions are known in the art to treat inflammatory disorders of the nose, such as rhinitis and sinusitis, and that it is known in the art to treat inflammatory disorders of the lung in a similar manner to those of the nose. The Examiner concludes that one would have been motivated to treat inflammatory disorders of the nose in the manner disclosed by *Katz* (appellants assume the Examiner means *Amschler et al.*) because of an expectation of success in treating a specific inflammatory disorder in a manner taught to be beneficial, generally, by *Katz*.

The Examiner argues that it would have been obvious to utilize the concentration of inflammatory mediator in a formulation as instantly claimed because *Katz* teaches the administration in general and teaches that a formulation should comprise a therapeutically effective amount. Appellants traverse the Examiner's rejections.

The Examiner states that appellants argue that *Amschler et al.* may teach that 3-amino-6-arylpyridazine compounds may be used to treat inflammatory disorders both in the lung and in the nose but *Amschler et al.* certainly does not teach that all compounds known to treat inflammatory disorders in the lung may be used in a similar manner to treat inflammatory disorders in the nose. The Examiner notes that *Katz* teaches a treatment of a disease state in a mammal caused by mammalian cells involved in the inflammatory response and there is no suggestion that this treatment is limited to the treating of inflammatory disorders of the lung. The Examiner argues that when examining the teaching of *Katz* with the teaching of *Amschler et al.*, that the inflammatory agents disclosed therein are known to be

useful for both the treatment of inflammatory disorders of the lung and nose, the skilled artisan would have been motivated by an expectation of success in treating inflammatory disorders of the nose with the methods and compositions of *Katz*.

The Examiner further contends that appellant's arguments that *Amschler et al.* certainly does not teach that all compounds known to treat inflammatory disorders in the lung may be used in a similar manner to treat inflammatory disorders in the nose are not persuasive because the teachings of *Katz* are not limited to the treatment of inflammatory disorders of the lung.

In summary, appellants submit that treatment of inflammatory disorders in the lung is very different from the treatment of inflammatory disorders in the nose and sinuses because of the different cell types and routes of metabolism. In the sinuses, nitric oxide and hydrogen peroxide are produced by epithelial cells which produce 1000x more nitric oxide and hydrogen peroxide than that produced in lung cells. In the lungs, nitric oxide and hydrogen peroxide are produced by white blood cells and can be turned off, when not required, producing very little nitric oxide and hydrogen peroxide. In the sinuses, the production of nitric oxide and hydrogen peroxide is constant because these compounds are used to kill viruses and bacteria contained in the inhaled air. Thus the use of inflammatory mediators such as pyruvate or pyruvate precursors in the lungs and in the sinuses is quite different. In the lungs, excess pyruvate is transported into the cell and used as energy, to increase nitric oxide, protect mitochondria, protect cellular DNA, membranes and increase bronchial dilation. In the sinuses, excess pyruvate is used up in seconds by the very high concentrations of oxygen radicals. The main function of pyruvate and pyruvate precursors in the sinuses is to protect sinus medicines from destruction and to lower excess oxygen radicals. Appellants submit that the teachings concerning the synthetic 3-amino-6-arylpyridazine compounds of *Amschler et al.* are not properly combinable with the natural pyruvate compounds taught by appellants because there is no suggestion or motivation in the references of *Katz* or *Amschler et al.* or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to the combine reference teachings in the manner proposed by the Examiner. At best, *Amschler et al.* may teach that 3-amino-6-arylpyridazine compounds may be used to treat inflammatory disorders both in the lung and in the nose but *Amschler et al.* certainly does not teach that <u>ALL</u> compounds known to

treat inflammatory disorders in the lung may be used in a similar manner to treat inflammatory disorders in the nose.

The Examiner submits that the method of *Katz* is not limited to the treating of inflammatory disorders of the lung. Appellants submit, on the other hand, that *Katz* does not teach the treating of inflammatory disorders in the nose. It is not proper within the framework of Section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary for the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.

The present invention provides a method for treating a disease state in mammals caused by mammalian nasal and sinus cells involved in the inflammatory response. The method comprises contacting the mammalian nasal and sinus cells with an inflammatory mediator. The inflammatory mediator is present in an amount capable of reducing the undesired inflammatory response and is an antioxidant. The inflammatory mediator is selected from the group consisting of pyruvate and pyruvate precursors.

The present invention also provides a method for the treatment of rhinitis, eosinophilia syndrome, and sinusitis and related conditions associated with nasal congestion. The method comprises administering a nasal solution to the nostrils of a patient in need thereof. The nasal moisturizing saline solution comprises water; sodium chloride, 0.65% by weight; pyruvate, at least 0.1mM; buffer; and optionally a preservative. The nasal moisturizing saline solution is buffered and made isotonic.

The *Katz* reference discloses a method for treating asthma in mammals caused by mammalian cells involved in the inflammatory response. The method comprises contacting the mammalian cells with an inflammatory mediator. The inflammatory mediator is an antioxidant and is selected from the group consisting of pyruvate and a pyruvate precursor. The inflammatory mediator is present in an amount capable of reducing the undesired inflammatory response and is not administered together with albuterol.

The *Amschler et al.* reference discloses 3-amino-6-arylpyridazine compounds that are said to be useful for the treatment of disorders of the bronchi, such as acute and chronic obstructive respiratory tract disorders of various

etiologies including bronchitis, allergic bronchitis, and bronchial asthma (*Amschler et al.* at col. 8, lines 36-56), useful for the treatment of dermatoses (*Amschler et al.* at col. 9, lines 16-32), useful for the treatment of pathological states caused by certain cytokines (*Amschler et al.* at col. 9, lines 53-60), and useful for the treatment of allergic and/or chronic false reactions in the region of the upper respiratory tract (pharyngeal space, nose) and the adjoining regions (paranasal sinuses, eye) such as allergic rhinitis/sinusitis, chronic rhinitis/sinusitis, allergic conjunctivitis and nasal polyps (*Amschler et al.* at col. 9, lines 61-68).

To establish a *prima facie case* of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on appellant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). MPEP 706.02(j)

The initial burden is on the Examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972. 973 (Bd. Pat. App. & Inter. 1985). MPEP 706.02(j)

The Examiner states that "it is known in the art to treat inflammatory disorders of the lung in a similar manner to those of the nose" and cites *Amschler et al.* to support this position. Appellants submit that the teachings concerning the synthetic 3-amino-6-arylpyridazine compounds of *Amschler et al.* are not properly combinable with the natural pyruvate compounds taught by appellants. Pyruvate is a combustion product of carbohydrates and forms the basic building block in the Krebs cycle. The synthetic 3-amino-6-arylpyridazine compounds of *Amschler et al.*

are in no way comparable to appellants' natural pyruvate compounds. In the lungs, excess pyruvate is transported into the cell and used as energy, to increase nitric oxide protect mitochondria, protect cellular DNA, membranes and increase bronchial dilation. In the sinuses, excess pyruvate is used up in seconds by the very high concentrations of oxygen radicals. There is no suggestion or motivation in the references of *Katz* or *Amschler et al.* or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to the combine reference teachings in the manner proposed by the Examiner. Moreover, there is no reasonable expectation of success combining *Katz* and *Amschler et al.* in the manner proposed by the Examiner. At best, *Amschler et al.* may teach that 3-amino-6-arylpyridazine compounds may be used to treat inflammatory disorders both in the lung and in the nose but *Amschler et al.* certainly does not teach that ALL compounds known to treat inflammatory disorders in the lung may be used in a similar manner to treat inflammatory disorders in the nose.

Accordingly, the Examiner's rejection of claims 1-6, 8-17 and 31 under 35 U.S.C. Section 103(a) as being obvious over *Katz* in view of *Amschler et al.* should be withdrawn.

Obviousness of a composition or process must be predicated on something more than it would be obvious "to try" the particular component recited in the claims or the possibility it will be considered in the future, having been neglected in the past. *Ex parte Argabright et al.* (POBA 1967) 161 U.S.P.Q. 703. There is usually an element of "obvious to try" in any research endeavor, since such research is not undertaken with complete blindness but with some semblance of a chance of success. "Obvious to try" is not a valid test of patentability. *In re Mercier* (CCPA 1975) 515 F2d 1161, 185 U.S.P.Q. 774; *Hybritech Inc. v. Monoclonal Antibodies. Inc.* (CAFC 1986) 802 F2d 1367, 231 U.S.P.Q. 81; *Ex parte Old* (BPAI 1985) 229 U.S.P.Q. 196; *In re Geiger* (CAFC 1987) 815 F2d 686, 2 U.S.P.Q.2d 1276. *In re Dow Chemical Co.* (CAFC 1988) F2d, 5 U.S.P.Q.2d 1529. Patentability determinations based on that as a test are contrary to statute. *In re Antonie* (CCPA 1977) 559 F2d 618, 195 U.S.P.Q. 6; *In re Goodwin et al.* (CCPA 1978) 576 F2d 375, 198 U.S.P.Q. 1; *In re Tomlinson et al.* (CCPA 1966) 363 F2d 928, 150 U.S.P.Q. 623. A rejection based on the opinion of the Examiner that it would be "obvious to try the chemical used in the claimed

process which imparted novelty to the process does not meet the requirement of the statute (35 U.S.C. 103) that the issue of obviousness be based on the subject matter as a whole. *In re Dien* (CCPA 1967) 371 F2d 886, 152 U.S.P.Q. 550; *In re Wiaains* (CCPA 1968) 397 F2d 356, 158 U.S.P.Q. 199; *In re Yates* (CCPA 1981) 663 F2d 1054, 211 U.S.P.Q. 1149. Arguing that mere routine experimentation was involved overlooks the second sentence of 35 U.S.C. Section 103. *In re Saether* (CCPA 1974) 492 F2d 849,181 U.S.P.Q. 36. The issue is whether the experimentation is within the teachings of the prior art. *In re Waymouth et al.* (CCPA 1974) 499 F2d 1273, 182 U.S.P.Q. 290. The fact that the prior art does not lead one skilled in the art to expect the process used to produce the claimed product would fail does not establish obviousness. *In re Dow Chem. Co.* (CAFC 1988) 5 U.S.P.Q.2d 1529.

The Second Issue

Whether or not appellants' claim 18 is obvious under 35 U.S.C. Section 103(a) over *Katz* and *Amschler et al.* in further view of *Geria*.

The Examiner has rejected claim 18 under 35 U.S.C. Section 103(a) as being unpatentable over *Katz* and *Amschler et al.* in further view of United States patent no. 5,478,565 (*Geria*). The Examiner concedes that *Katz* and *Amschler et al.* lack a specific teaching of oxymetazoline but that *Geria* teaches that oxymetazoline is known for the treatment of rhinitis and sinusitis, particularly with the congestion associated therewith (col. 4, lines 1-15). The Examiner argues that it would have been obvious to utilize oxymetazoline as the optional therapeutic agent of *Katz* because (1) *Katz* teaches that additional therapeutic agents may be utilized in addition to the inflammatory modulators disclosed therein; (2) the combined references render a treatment of rhinitis or sinusitis obvious; (3) oxymetazoline is taught by *Geria* as known in the art to be useful for the treatment of both rhinitis and sinusitis; and (4) it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. The Examiner notes that the skilled artisan would have been further motivated to add the oxymetazoline to the treatment of the combined references because of an expectation of success of providing, in addition to the reduction of the inflammatory

response effectuated by the inflammatory modulator of *Katz*, congestion relief to the patient suffering from sinusitis or rhinitis. Appellants traverse the Examiner's rejection.

The *Geria* reference discloses a topically applicable nasal composition capable of relieving mammalian sinus headache which comprises (i) an anaesthetically effective amount of an acid addition salt of dyclonine or pramoxine and (ii) an adrenergic ally effective amount of an acid addition salt of a sympathomimetic amine decongestant selected from the group consisting of an arylalkylamine, imidazoline and a cycloalkylamine incorporated in a pharmaceutically acceptable carrier. The sympathomimetic amine decongestant may be selected from the group consisting of phenylephrine, epinephrine, ephedrine, desoxyphedrine, phenylpropanolamine, tuaminoheptane, naphazoline, oxymetazoline, tetrahydrozoline, xylometazoline, propylhexadrine and mixtures thereof.

As set out above, the combination of the primary references of *Katz* and *Amschler et al.* do not provide appellants' method for treating a disease state in mammals caused by mammalian nasal and sinus cells involved in the inflammatory response. Because the primary references of *Katz* and *Amschler et al.* do not teach or suggest appellants' invention, the addition of the secondary reference of *Geria*, which merely discloses a topically applicable nasal composition containing a sympathomimetic amine decongestant which may be oxymetazoline, adds nothing to the primary references of *Katz* and *Amschler et al.*

Accordingly, the Examiner's rejection of claim 18 under 35 U.S.C. Section 103(a) as being unpatentable over *Katz* and *Amschler et al.* further in view of *Geria* should be withdrawn.

The Third Issue

Whether or not appellants' claims 27-30 are obvious under 35 U.S.C. Section 103(a) over *Katz* and *Amschler et al.* and in further view of *Picciano*.

The Examiner has rejected claims 27-30 under 35 U.S.C. Section 103(a) as being obvious over *Katz* and *Amschler et al.* and further in view of United States patent no. 5,897,872 (*Picciano*). The Examiner states that *Katz* and *Amschler et al.* lack a specific teaching of the preferred solution formulation but that *Picciano*

teaches the treatment of sinusitis with an isotonic buffered nasal saline solution comprising water, sodium chloride, 0.65% by weight, iodine, buffer and a preservative (col. 4, lines 52-59). The Examiner states that sodium bicarbonate, disodium phosphate/sodium phosphate and monobasic potassium phosphate/sodium hydroxide are taught as buffers (col. 4, lines 62-65) and phenylcarbinol, benzalkonium chloride and thimerosal are taught as preservatives (col. 4, lines 65-67). The Examiner states that the solution is taught to alleviate congestion and to provide moisturization (col. 4, lines 52-59). The Examiner concludes that it would have been obvious to treat a patient suffering from sinusitis with the inflammatory modulators of the combined references in the solution of *Picciano* because (1) *Katz* teaches the formulation of the compositions disclosed therein as formulated in solutions, in general; (2) the combined references render a method of treating sinusitis with inflammatory modulator compositions obvious; (3) *Picciano* teaches a solution which is itself useful for treating sinusitis; and (4) it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose The Examiner notes that the skilled artisan would have been further motivated to utilize the solution of *Picciano* as the solution for the administration of the inflammatory modulators of the combined references because of an expectation of success of providing, in addition to the reduction of the inflammatory response effectuated by the inflammatory modulator of *Katz*, both congestion relief and nasal moisturization to the patient suffering from sinusitis. Appellants traverse the Examiner's rejection.

The *Picciano* reference discloses a nasal moisturizing saline solution, comprising: a) water, b) sodium chloride, 0.65% by weight, c) iodine, at least 0.001 % by weight, d) buffer, and e) a preservative, wherein the nasal moisturizing saline solution is buffered and made isotonic.

As set out above, the combination of the primary references of *Katz* and *Amschler et al.* do not provide appellants' method for treating a disease state in mammals caused by mammalian nasal and sinus cells involved in the inflammatory response. Because the primary references of *Katz* and *Amschler et al.* do not teach or suggest appellants' invention, the addition of the secondary reference of

Picciano, which merely discloses a nasal moisturizing saline solution, adds nothing to the primary references of *Katz* and *Amschler et al.*

Accordingly, the Examiner's rejection of claims 27-30 under 35 U.S.C. Section 103(a) as being obvious over *Katz* and *Amschler et al.* and further in view of *Picciano* should be withdrawn.

CONCLUSION

There is no disclosure of facts in the prior art which support a legal conclusion that the claimed invention was obvious at the time it was made. It is a well settled principle that prior patents are references only for what they clearly disclose or suggest and that it is not proper use of a patent as a reference to modify its structure to one which the reference does not suggest.

Appellants' brief has effectively rebutted the position of the Patent Office. The burden of going forward with proofs to support its position as to obviousness of the claimed invention has shifted to the Patent Office. In view of the above remarks, the Examiner's rejections of appellants' claims should be reversed so that the present claims may be allowed to issue. Appellants' attorney authorizes the Examiner to charge Deposit Account 13-4822 if there are any additional charges in connection with this matter.

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(viii) CLAIMS APPENDIX.

1. A method for treating a disease state in mammals caused by mammalian nasal and sinus cells involved in the inflammatory response comprising contacting the mammalian nasal and sinus cells with an inflammatory mediator; wherein the inflammatory mediator is present in an amount capable of reducing the undesired inflammatory response, is an antioxidant, and is selected from the group consisting of pyruvate and a pyruvate precursors, wherein the pyruvate precursor is not propylene glycol.

2. The method according to claim 1, wherein the inflammatory mediator is formulated into nasal drops.

3. The method according to claim 2, wherein the inflammatory mediator is formulated in a concentration of about 0.1mM to 10.0 mM.

4. The method according to claim 1, wherein the inflammatory mediator is formulated into a nasal ointment.

5. The method according to claim 4, wherein the inflammatory mediator is formulated in a concentration of 0.1mM to 10.0 mM.

6. The method of claim 1, wherein the inflammatory response being reduced is at least one of the following: oxygen radical production, hydrogen peroxide production, cytokine and protease production, prostaglandin production, erythema, histamine and interleukin production.

8. The method of claim 1, wherein the inflammatory mediator is pyruvate.

9. The method of claim 8, wherein the pyruvate is selected from the group consisting of pyruvic acid, lithium pyruvate, sodium pyruvate, potassium pyruvate, magnesium pyruvate, calcium pyruvate, zinc pyruvate, manganese pyruvate, and mixtures thereof.

10. The method of claim 1, wherein the inflammatory mediator is a pyruvate precursor.

11. The method of claim 10, wherein the pyruvate precursor is selected from the group consisting of pyruvyl-glycene, pyruvyl-alanine, pyruvyl-leucine, pyruvyl-cysteine, pyruvyl-valine, pyruvyl-isoleucine, pyruvyl-phenylalanine, pyruvamide, dihydroxyacetone, and salts of pyruvic acid.

12. The method of claim 1, wherein the disease state is selected from the group consisting of rhinitis, eosiophilia syndrome, and sinusitis.

13. The method of claim 1, further comprising contacting the mammalian nasal and sinus cells with a therapeutic agent.

14. The method of claim 13, wherein the therapeutic agent is administered prior to the inflammatory mediator.

15. The method of claim 13, wherein the therapeutic agent is administered concomitantly with administration of the inflammatory mediator.

16. The method of claim 13, wherein the therapeutic agent is administered after administration of the inflammatory mediator.

17. The method of claim 13, wherein the therapeutic agent is one or more agents selected from the group consisting of antibacterials, antivirals, antifungals, antihistamines, proteins, enzymes, hormones, nonsteroidal anti-inflammatories, cytokines, insulin, vitamins and steroids.

18. The method of claim 13, wherein the therapeutic agent is oxymetazoline.

27. A method for the treatment of rhinitis, eosinophilia syndrome, and sinusitis, comprising administering a nasal solution to the nostrils of a patient in need thereof, wherein the nasal moisturizing saline solution comprises:

a) water,

b) sodium chloride, 0.65% by weight,

c) pyruvate, at least 0.1mM,

d) buffer, and optionally,

e) a preservative;

wherein the nasal moisturizing saline solution is buffered and made isotonic.

28. The method of claim 27, wherein the pyruvate is present in the solution at a concentration between from about 0.1mM to about 10mM.

29. The method of claim 27, wherein the buffer is selected from the group consisting of sodium bicarbonate, disodium phosphate/sodium phosphate, and monobasic potassium phosphate/sodium hydroxide.

29. The method of claim 27, wherein the preservative is selected from the group consisting of phenylcarbinol, benzalkonium chloride, and thimerosal.

30. The method of claim 27, wherein the pyruvate is present in the solution at a concentration of about 5mM, the buffer is sodium bicarbonate, and the preservative is phenylcarbinol.

31. The method of claim 13, wherein the therapeutic agent is an antibacterial.

(ix) EVIDENCE APPENDIX.

In this application, no evidence has been submitted pursuant to §1.130, §1.131, or §1.132 of this title or any other evidence entered by the Examiner and relied upon by appellant in the appeal.

(x) RELATED PROCEEDINGS APPENDIX.

There are no decisions rendered by a court or the Board in any proceeding identified pursuant to paragraph (c)(1) (ii) of this section.